

ENVIRONMENT & WATER  
DIVISION

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Updated  
depollution  
projects in the  
Mediterranean

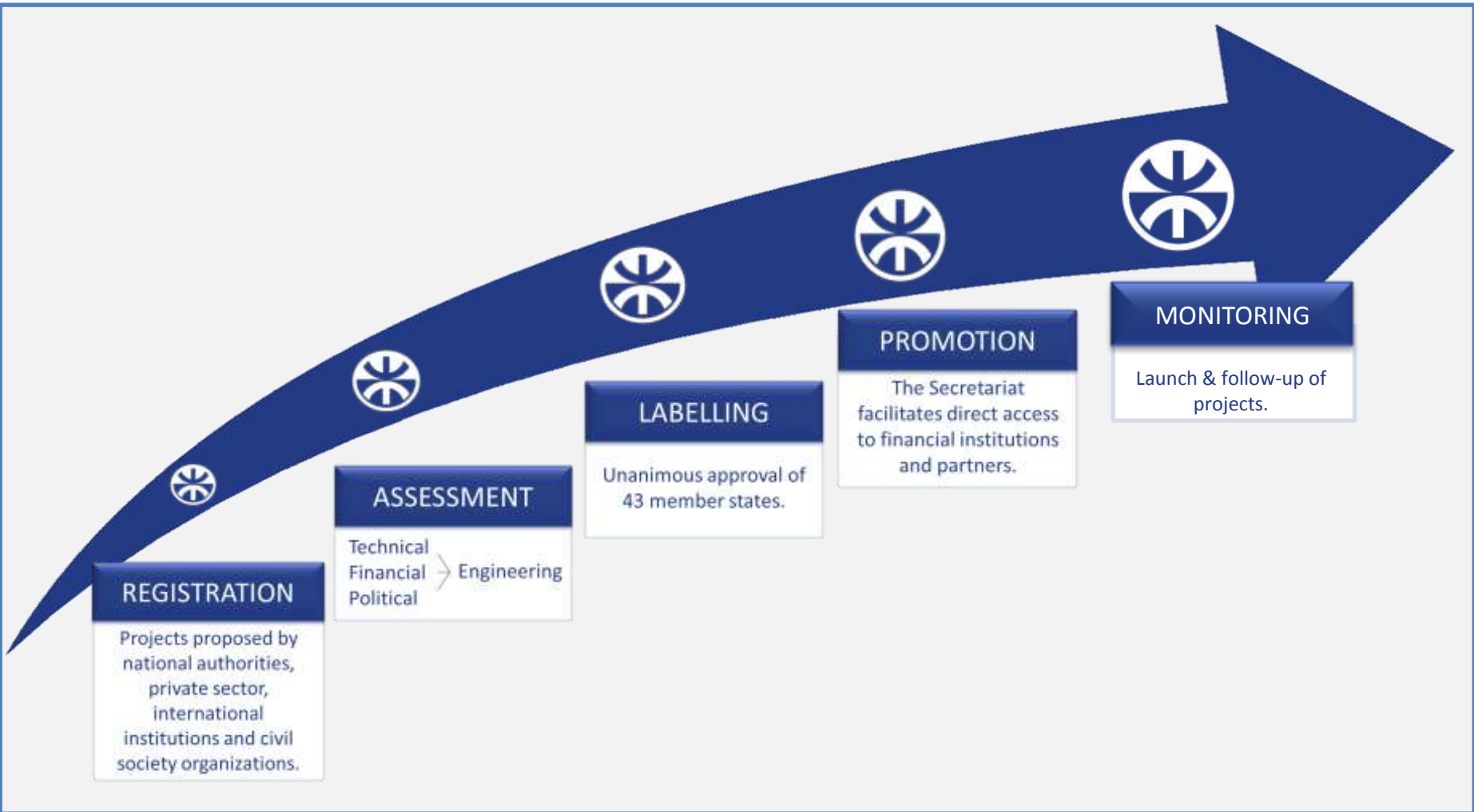


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H2020 Steering Committee meeting  
Brussels 19-20 Nov. 2013

# UfM Projects | Project Lifecycle



# The studies | Origin and Objectives



## A new Phase of depollution National Action Plans (NAPs) and of Horizon 2020

In the perspective of a new phase of NAPs and H2020, the UfM Secretariat was asked in 2012 by UNEP/MAP and by the EC to undertake a study contributing to comprehensively assess what is the current situation of investment projects to de-pollute the Mediterranean (what has been achieved, and what has to be done in the future).

The objective is to give an overall picture of the 22 countries bordering the Sea.

1. UNEP/MAP reviewed the policy component of the NAPs, and exploited the data reporting of 2003 and 2008
2. Whilst UfM focused on investment projects already in the NAPs or requested so as to meet the 2025 targets of Medpol, and included Jordan

## 2 other parallel studies | Coordination and synergies

1. **MeHSIP-PPIF (EIB): state of progress of 50 projects with secured funding in 8 countries eligible to H2020 initiative**
2. **Shared Environment Information System / SEIS (EEA): definition and production of 6 indicators related to H2020 initiative, as well as set up of a reporting mechanism**

- 3 phases from January to November 2013
- Southern Countries: country visits in general coordinated with MeHSIP visit
- All countries: local experts and desk studies
- Coordination meetings between Partners (EC, EIB, UNEP/MAP, EEA) and between their consultants
- FTP server to share working documents
- Participation to the Medpol Focal Points meeting (June)
- Sharing documents and final coordination in Barcelona (September)

# Deliveries

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## Country reports:

- **Background and pollution Hot Spots in 2005**
- **Overview of 3 sectors: Waste Water, Solid Waste, Industrial Emissions**
- **List of projects with maps**
- **Estimation of the reduction of pollution loads and costs expected from the projects identified or needed in addition so as to meet the 2025 targets**



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*PROJECTS FOR PROGRESS*

# Deliveries

## Regional report:

- **State of progress of NAPs projects and possible impact on Hot Spots**
- **Remaining efforts in terms of projects, pollution loads, costs**
- **Priority projects at the regional level**
- **Recommendations for the Mediterranean actors at national or regional level**

# Findings | Number of projects

**Various geographical areas:** H2020 deals with Countries from the South but also reviewed in 2011 projects of Western Balkans and Turkey; NAPs are developed for all countries bordering the Mediterranean Sea except Palestine and UfM lists come from 22 countries including Jordan

**Various sectors:** Waste water, solid waste and industrial emissions

**Various state of progress:** the projects might be operational, under construction, planned, or just extension/upgrade needs

**More projects identified:** NAPs X 2 because of new projects and new objectives set up by Medpol; H2020 X 4 because of selection criteria in its pipeline

countries	H2020	NAPs	UfM
Algeria	1	17	76
Egypt	19*	32	37
Israel	14	61	70
Jordan	17	0	19
Lebanon	6	25	27
Libya	6	38	38
Morocco	5	19	33
Palestine	5	7	27
Syria	5	8	8
Tunisia	17*	10	86
<b>Total South</b>	<b>95</b>	<b>217</b>	<b>421</b>
<b>Total W. Balkans &amp; Turkey</b>	<b>54</b>	<b>133</b>	<b>192</b>
<b>Total EU</b>	<b>15*</b>	<b>71*</b>	<b>299</b>
<b>Total Mediterranean</b>	<b>128</b>	<b>421</b>	<b>912</b>

\* Means that a project is in fact composed of a bundle of cities or industrial sites



# Findings | Projects per sectors

## Waste water projects:

- 68% of them were not in the NAPs;
- 50% are operational but more than half of them need extension or upgrade; 22% are under construction; 30% are under preparation or planned
- 77% have secured funding

## Solid Waste projects:

- 32% of them were not in the NAPs;
- 31% are operational; 10% are under construction; 33% are under preparation or planned
- 38% have secured funding

## Industrial Emissions:

- Although some industrial pollution are taken into account through public WW or SW facilities, the list is far from complete
- Information attached to projects is often insufficient

countries	WW	SW	IE
Algeria	71	4	1
Egypt	22	7	8
Israel	51	12	7
Jordan	14	3	2
Lebanon	17	9	1
Libya	15	20	3
Morocco	18	6	9
Palestine	18	8	1
Syria	4	1	3
Tunisia	58	23	5
<b>Total South</b>	<b>288</b>	<b>93</b>	<b>40</b>
<b>Total W. Balkans &amp; Turkey</b>	<b>80</b>	<b>50</b>	<b>62</b>
<b>Total EU</b>	<b>245</b>	<b>39</b>	<b>15</b>
<b>Total Mediterranean</b>	<b>613</b>	<b>182</b>	<b>117</b>

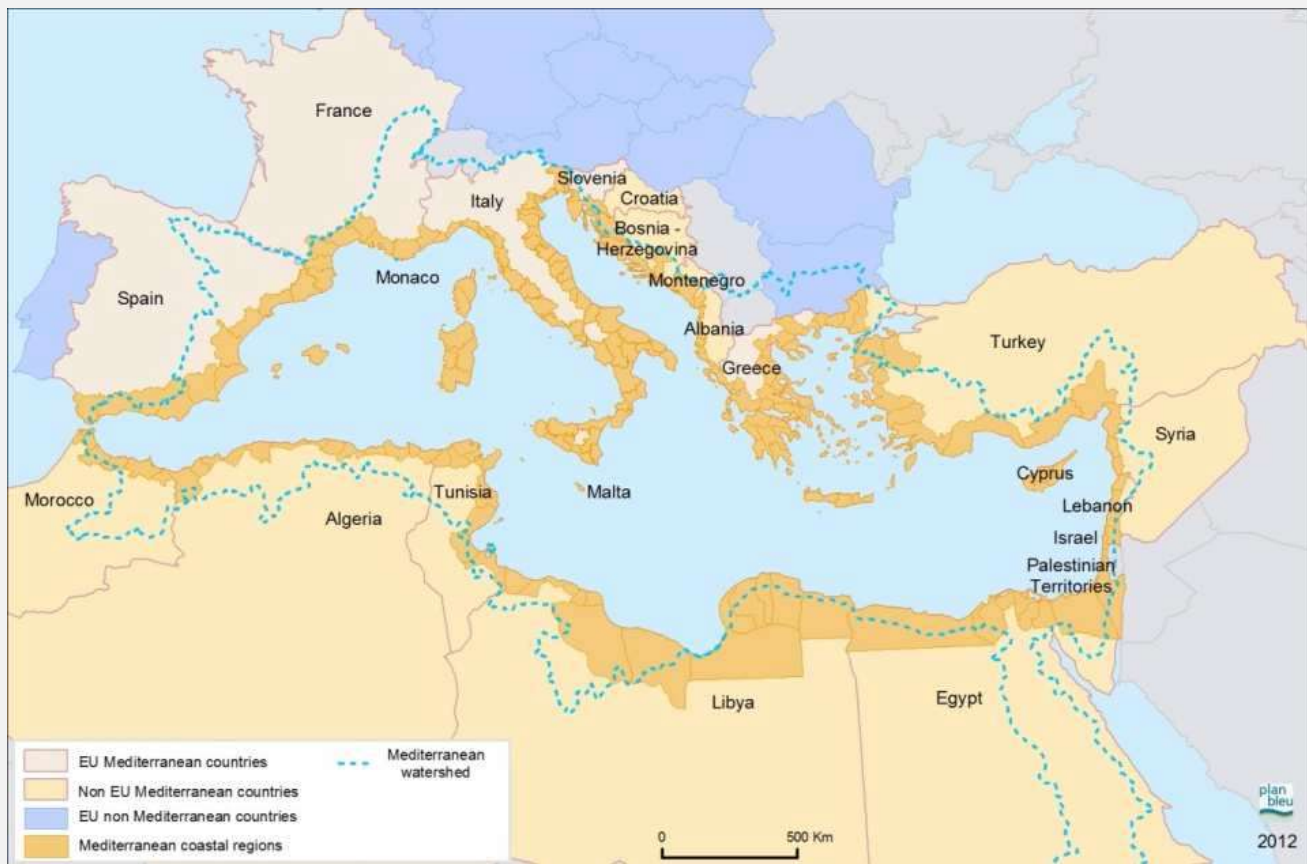
# Waste Water projects | Origins of pollution

## Coastal administrative units

- Local impacts

## Watershed areas for rivers going to the Sea

- Remote impacts



# Findings | Pollution loads reduction attached to the Waste Water projects

## Population served in 2025 by the projects listed:

- In the South except Egypt, Libya and Syria: 32.2 M inhabitants among a total of 68 in the Mediterranean watershed area;

## Loads reduction in 2025 attached to these projects, in kT/yr of BOD<sub>5</sub>, for South:

- 216 kT/yr from projects operational yet (most probably NAPs);
- 217 kT/yr are under construction or funded, and should be operational within 2020;
- Additional 178 kT/yr are not defined or funded yet

## Non-South countries:

- Huge reduction achieved;
- Remaining efforts in Italy, Turkey, Croatia and Bosnia & Herzegovina

countries	Population served in 2025	LOADS REDUCTION (in kT/yr BOD <sub>5</sub> )			
		achieved	ad. funded	gap	Total
Algeria	5.5	24.6	57.6	26.0	83.6
Egypt	?	?	?	?	0.0
Israel	8.1	113.4	32.8	21.8	54.6
Jordan	1.0	2.3	8.9	7.8	16.7
Lebanon	5.9	0.6	76.2	38.7	114.9
Libya	?	?	?	?	0.0
Morocco	2.8	8.9	4.0	42.4	46.4
Palestine	4.1	2.5	10.0	35.0	45.0
Syria	?	?	?	?	0.0
Tunisia	4.8	63.8	27.9	6.0	33.9
<b>Total South</b>	<b>32.2</b>	<b>216.1</b>	<b>217.4</b>	<b>177.7</b>	<b>395.1</b>
Albania	2.3	9.2	10.3	8.0	18.3
Bosnia & Herzegovina	0.5	0.7	1.8	7.1	8.9
Montenegro	0.5	0.2	5.1	1.9	7.0
Turkey	7.1	26.4	38.9	81.8	120.7
<b>Total W. Balkans &amp; Turkey</b>	<b>10.4</b>	<b>36.5</b>	<b>56.1</b>	<b>98.8</b>	<b>154.9</b>
Croatia	2.0	3.3	34.8	8.4	43.2
Cyprus	0.4	4.7	4.4	0.0	4.4
France	3.1	37.8	1.4	21.6	23.0
Greece	6.4	110.8	1.0	17.1	18.1
Italy	13.2	118.1	65.7	90.8	156.5
Malta	0.7	1.1	8.0	4.6	12.6
Monaco	0.04	0.8	0.0	0.0	0.0
Slovenia	0.1	0.8	0.8	0.3	1.1
Spain	4.0	36.9	16.4	29.9	46.3
<b>Total EU</b>	<b>29.9</b>	<b>314.3</b>	<b>132.5</b>	<b>172.7</b>	<b>305.2</b>
<b>Total Mediterranean</b>	<b>72.5</b>	<b>566.9</b>	<b>406.0</b>	<b>449.2</b>	<b>855.2</b>

# Findings | Costs estimation attached to the Waste Water projects

## Lack of information:

- ? = no information at all
- Green = partial information

## Definition of costs:

- Costs of identified projects = budget attached to projects undergone or planned with secured funding
- Costs gaps = estimation of investment needed to tackle the depollution gap

## Trends:

- Costs gaps are in general several times higher than costs already spent or budgeted (last 15 years);
- Investments needed are much important in sewage networks than in Waste Water Treatment Plants

countries	COSTS in M€			
	Total	id. projects	Networks gap	WWTP gap
Algeria	782	?	706	76
Egypt	2011	2011	?	?
Israel	992	758	132	102
Jordan	175	?	139	36
Lebanon	845	169	626	50
Libya	0	?	?	?
Morocco	661	157	431	73
Palestine	957	287	514	156
Syria	0	?	?	?
Tunisia	398	?	57	341
<b>Total South</b>	<b>6821</b>	<b>3382</b>	<b>2605</b>	<b>834</b>
Albania	526	249	106	171
Bosnia & Herzegovina	333	64	191	78
Montenegro	126	?	89	37
Turkey	2004	?	1071	933
<b>Total W. Balkans &amp; Turkey</b>	<b>2989</b>	<b>313</b>	<b>1457</b>	<b>1219</b>

# Findings | Hot Spots removal

## Definition:

- A Hot Spot is likely to be removed when WW or SW projects located less than 10 km from the Hot Spot become operational
- The removal is likely to be already done if projects are operational, likely to be in 2015 if projects are under construction; likely to be in 2020 if projects are under preparation or planned

## Analysis and trends:

- No conclusion for more than 40% of the Hot Spots
- Already 25% of the Hot Spots should have been already tackled, half of them in the EU
- By 2020, 60% of the Hot Spots are likely to be tackled

countries	Nb of HS	Probable timing of removal			
	Total	past	2015	2020	unknown
Algeria	7	3	1	0	3
Egypt	5	0	0	1	4
Israel	6	3	1	2	0
Jordan	0	0	0	0	0
Lebanon	6	0	2	4	0
Libya	8	0	0	0	8
Morocco	4	2	0	2	0
Palestine	0	0	0	0	0
Syria	4	0	0	0	4
Tunisia	4	0	0	3	1
<b>Total South</b>	<b>44</b>	<b>8</b>	<b>4</b>	<b>12</b>	<b>20</b>
Albania	3	0	1	1	1
Bosnia & Herzegovina	5	0	2	3	0
Montenegro	4	0	0	0	4
Turkey	19	8	2	3	6
<b>Total W. Balkans &amp; Turkey</b>	<b>31</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>11</b>
Croatia	10	0	1	8	1
Cyprus	2	0	1	0	1
France	4	4	0	0	0
Greece	8	2	0	0	6
Italy	15	6	0	0	9
Malta	3	0	0	3	0
Monaco	0	0	0	0	0
Slovenia	5	2	0	0	3
Spain	5	3	0	0	2
<b>Total EU</b>	<b>52</b>	<b>17</b>	<b>2</b>	<b>11</b>	<b>22</b>
<b>Total Mediterranean</b>	<b>127</b>	<b>33</b>	<b>11</b>	<b>30</b>	<b>53</b>

# Recommendations | Themes of action suggested to Mediterranean stakeholders

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- **TECHNICAL PRIORITIES:** Disinfection in coastal areas; maintenance of existing facilities and their extension or upgrade
- **SUSTAINABLE CONSUMPTION & PRODUCTION:** Reduction at source and recycling in the 3 sectors, so as to avoid end-of-pipe projects not consistent with financial means or targeted deadlines
- **ECONOMIC INSTRUMENTS:** Increase the average price for municipal services without adversely affecting the poor; implement sound polluter/pays instruments
- **IMPROVEMENT OF NATIONAL TOOLS:** Coordination between Ministries for planning, monitoring and control of depollution projects; set in place an overall process of industrial pollution prevention and control
- **REVISION OF UNEP/MAP PLANNING DOCUMENTS:** adaptation of SAP Med guidelines; revision of the NAPs in relation with other EU Directives and ECAP
- **DECENTRALIZED COOPERATION:** Long-term twinning between local authorities, complementary to classical training sessions

# Recommendations | Themes of action suggested to UfMS

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1

**CONTINUOUS MONITORING OF PROJECTS:** see UNEP/MAP, EEA and UfM information projects

2

**LABELING OF EXEMPLARY PROJECTS AND FUND-RAISING:** 3 to 5 projects/year. A first list of priority projects from regional criteria has been delivered by the consultant but needs to be checked by the UfM





# UfM projects | Environment



## INTEGRATED PROGRAMME FOR PROTECTION OF THE LAKE BIZERTE AGAINST POLLUTION

<b>Promoter</b>	Ministry of Equipment and Environment of Tunisia
<b>Objective</b>	To rehabilitate the environment and water quality of the lake in responding to the widespread recognition of lake Bizerte as a flagship depollution project of the Euro-Mediterranean initiative Horizon 2020
<b>Beneficiaries</b>	More than 400.000 directly affected local populations, as well as private and state-owned companies, municipal liquid and solid waste utilities, fisheries and agriculture
<b>Duration</b>	2014 – 2019
<b>Budget</b>	<b>EUR 90 m</b>





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*THANK YOU FOR YOUR ATTENTION*

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